PSY14

EVALUATING TRENDS IN CHRONIC PAIN PREVALENCE IN THE UNITED STATES VETERANS HEALTH ADMINISTRATION POPULATION

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OBJECTIVES: The current study examined chronic pain prevalence in the U.S. Veterans Health Administration (VHA) population. **METHODS:** The study sample was based on the VHA Medical SAS Datasets from fiscal year 2008 through 2012. All patients diagnosed with chronic pain throughout the study period were identified using International Classification of Diseases, 9th Revision, Clinical Modification diagnosis codes 338.2 and 338.4. The variation in the prevalence of chronic pain was assessed and categorized according to the pain scale. Pain score was determined using a scale ranging from 0 to 10 as reported by patients using the following categories: 1 to 4: mild, 5 to 6: moderate and ≥7: severe pain. To identify prior prevalence cases, we restricted continuous enrollment throughout that fiscal year and at least 2 years prior. **RESULTS:** In 2008, patients aged 45-64 had the highest percentage of patients with mild (56.4 %), moderate (60.7%) and severe (65.4%) pain. This trend was found for all study years. In 2008, white patients had the highest prevalence of mild (64.29%), moderate (62.07%) and severe (59.06%) pain. Similarly, in 2008, patients who resided in the South U.S. region had the highest prevalence of mild (32.89%), moderate (33.68%) and severe (36.39%) pain compared to other regions. This trend continued through all study years. Utah had the highest prevalence of chronic pain in 2008 (4.9%) and 2012 (24.0%). **CONCLUSIONS:** Among VHA beneficiaries with chronic pain, patients who were age 45-64 years had the highest prevalence of chronic pain. Also, white patients and those who resided in the South U.S. region had the highest prevalence of chronic pain.

PSY15

USE OF HYDROCODONE/ACETAMINOPHEN: PREVALENCE AND ESTIMATING EMERGENCY DEPARTMENT VISITS

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OBJECTIVES: An estimated 100 million adult Americans suffer from chronic pain. Prescribing opioids remains a primary treatment option for physicians. Hydrocodone/acetaminophen (HC/APAP) is the most commonly prescribed opioid in the US. However, the FDA recently rescheduled HC/APAP from Schedule III to II, due to negative outcomes, including its association with emergency department (ED) visits. The objective of this study was to estimate the impact of HC/APAP use in Texas on ED visits, based on the prevalence of HC/APAP prescriptions within the state. **METHODS:** A retrospective cohort design used data from the Drug Abuse Warning Network (DAWN) on ED visits associated with HC/APAP. Additionally, data from the Texas prescription drug monitoring program (PDMP) with patient level information for all Schedule II to V drugs dispensed within the state for a 12 month period was used to assess the prevalence of patients taking HC/APAP. This analysis yielded estimates of potential ED visits related to HC/APAP within Texas. **RESULTS:** National estimates from DAWN reveal that ED visits related to HC/APAP increased from 23.6 per 100,000 population in 2004 to 50.2 per 100,000 population in 2011. Data from the Texas PDMP contained 39,904,964 distinct prescriptions for all Schedule II to V controlled substances for the period from June 2013 to May 2014 within the state of Texas. **CONCLUSIONS:** The use of HC/APAP requires more active monitoring in order to reduce the number of ED visits associated with its use. Future studies should investigate whether rescheduling HC/APAP leads to reduction of related ED visits.

PSY16

MORTALITY RISK IN PATIENTS WITH PSORIASIS

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OBJECTIVES: This study examined mortality risk among patients with psoriasis in the United States. **METHODS:** MarketScan databases were linked to the Social Security Administration death file to select adults with ≥1 inpatient or ≥2 outpatient diagnoses of psoriasis (ICD-9-CM 696.1x) during the study period (1/1/2006 to 6/30/2014). The first psoriasis diagnosis was the index date. Patients had 6 months of pre index continuous enrollment and were followed until the earliest of death or end of the study period. Comorbidities during the pre-index period were examined. Mortality incidence was calculated for psoriasis patients by comorbidities and age group. A Cox proportional hazards model was used to identify predictors of mortality. **RESULTS:** The sample comprised 102,573 psoriasis patients with mean age of 52.7 years (yrs). Patients were followed for an average of 4.9 yrs and 3.4% died during the study period. The mean age at death was 75.5 yrs. The mortality rate was 7.0 per 1,000 person-years (PY) and increased with age (0.8 per 1,000 PY in patients aged 18-24 yrs versus 45.5 per 1,000 PY in patients ≥ 75 yrs). The mortality rate was significantly higher for psoriasis patients with (versus without) diabetes (17.5 vs. 5.7), hypertension (12.6 vs. 4.8), coronary heart disease (24.9 vs. 5.4), cerebrovascular disease (31.9 vs. 6.2), and peripheral vascular disease (36.8 vs. 6.1) (all $p<0.05$). Multivariate analysis suggested that older age, female gender, higher Charlson Comorbidity Index (CCI) score, and presence of comorbidities (diabetes, coronary heart disease, cerebrovascular disease, peripheral vascular disease, and malignancy) were associated with increased risk of mortality amongst psoriasis patients (all $p<0.001$). **CONCLUSIONS:** Among patients with psoriasis, the rate of mortality was 7.0 per 1,000 person-years. Diabetes, cardiovascular diseases, malignancy, female gender, older age, and increased CCI scores were associated with an elevated risk of mortality in this cohort of psoriasis patients.

SYSTEMIC DISORDERS/CONDITIONS – Cost Studies

PSY17

BUDGET IMPACT ANALYSIS OF FACTOR REPLACEMENT THERAPY WITH TUROCTOCOG ALFA IN THE TREATMENT OF HEMOPHILIA A

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OBJECTIVES: This study aimed to determine the budget impact of adding turoctocog alfa to a U.S. health plan insurer's formulary for the treatment of hemophilia A. **METHODS:** A budget impact model was developed to evaluate factor replacement therapy costs, for patients with hemophilia A (without inhibitors), from the perspective of a US managed care plan. Key model inputs included benefit plan characteristics (i.e. number of members and time frame of the model), patient characteristics (i.e. number of pediatric and adult patients; mean weight), treatment characteristics (i.e. prophylaxis, on-demand, or perioperative treatment), and disease outcomes (i.e. annual bleed rate, severity level of bleeding episode, bleed control, and major surgery). The model compared treatment with turoctocog alfa versus marketed recombinant and plasma-derived FVIII alternatives. For children and adults, base case weight-based dosage and frequency for prophylaxis was assumed to follow the Malmö Protocol, whereas on-demand and perioperative dosages were based on respective product package inserts. Market share was indexed at Year 1. All costs were based on estimated WAC drug costs (US dollars), and product information current as of January 15, 2015. **RESULTS:** For a hypothetical managed care plan with 1,000,000 members, the estimated number of hemophilia A patients was 39, based on US prevalence data. Assuming proportional adoption of turoctocog alfa from all branded rFVIII and plasma-derived FVIII, total annual treatment costs were $10,133,595 without turoctocog alfa and $10,138,671 with turoctocog alfa, resulting in a budget impact of $5,076 or $0.00042 per member per month (PMPM). Results were sensitive to prevalence of hemophilia A, drug cost, proportion of patients on prophylaxis, and proportion of major bleeding episodes for patients treated on-demand, based on one-way sensitivity analyses. **CONCLUSIONS:** Inclusion of turoctocog alfa on a formulary provides a budget neutral treatment option, having a negligible budget impact on the annual pharmacy budget.

PSY18

MANAGED CARE ORGANIZATION BUDGET IMPACT OF ADDING RECOMBINANT FACTOR VIII FC FUSION PROTEIN (RFVIIIFC) TO THE FORMULARY FOR THE TREATMENT OF HEMOPHILIA A

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OBJECTIVES: To estimate the budget impact of adding rFVIIIFc to a managed care organization (MCO) formulary in the United States **METHODS:** A model was developed in Microsoft® Excel 2010 to evaluate the budget impact of including rFVIIIFc on formularies along with other recombinant FVIII (rFVIII) therapies over a 2-year time horizon. The model compared the drug-related costs of an MCO formulary containing conventional FVIII treatments with the costs of a formulary that also includes rFVIIIFc. The number of people with hemophilia A in the MCO was estimated using published prevalence data and was limited to adults with severe hemophilia A, free from FVIII inhibitors (neutralizing antibodies), receiving treatment with rFVIII therapy. It was assumed that 55% of patients receive prophylaxis therapy while the remaining 45% receive episodic therapy. Market share of rFVIIIFc was assumed to increase from 0% to 8.5% in year 1 and year 2. Medication costs were the only resource included in the budget impact model. The annual costs associated with factor replacement therapy were estimated by factor unit costs (acquisition cost) and by annual factor consumption. Annual factor consumption and bleeding rates were estimated using clinical trial and real world data. **RESULTS:** The estimated budget impact of adding rFVIIIFc to the formulary was associated with a budget increase of 1.4%/year for a private payer population of 1,000,000 plan members, with an estimated 21 members receiving treatment for hemophilia A. The overall impact to the budget was estimated to be $121,176 per year which corresponds to $0.01 per member per month, largely due to patients switching from episodic to prophylaxis therapy. Switching to rFVIIIFc therapy was projected to reduce the annual bleed rate by approximately 3.1 bleeds/patient/year, with an incremental cost of $1,880 per bleed avoided. **CONCLUSIONS:** Introduction of rFVIIIFc into MCO formularies may be associated with minimal budget impact.

PSY19

ECONOMIC IMPLICATIONS OF INCREASING USAGE OF CALCIUM-FREE BALANCED CRYSTALLOID SOLUTIONS (BAL) VERSUS 0.9% SALINE FOR INTRAVENOUS (IV) FLUID THERAPY IN PATIENTS WITH SYSTEMIC INFLAMMATORY RESPONSE SYNDROME (SIRS) IN US HOSPITALS

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OBJECTIVES: Growing emphasis on cost containment in healthcare means that hospitals must develop strategies to minimize adverse clinical outcomes while increasing cost efficiency. A propensity-matched retrospective analysis of SIRS patients from a large US electronic health record (EHR) database identified significantly reduced odds of serious complications, when IV fluid therapy was predominantly with BAL versus 0.9% saline.[1]This analysis evaluates the economic implication of increasing usage of BAL for IV fluid therapy in SIRS patients from a US hospital perspective. Impact of Intravenous Fluid Composition on Outcomes in Patients with the Systemic Inflammatory Response Syndrome Andrew D. Shaw; Carol R. Schermer, Dileep N. Lobo, Sibyl H. Munson, Victor Khangulov, David Hayashida, and John A. Kellum: submitted for publication. **METHODS:** A budget impact model (BIM) was developed to assess the impact of increased usage of BAL in SIRS patients. Model parameters combined clinical inputs derived from the retrospective EHR analysis with fluid costs and complication-associated costs obtained from published reports